

Claims:

1. A communications system comprising: a communications network comprising network nodes and network links between the network nodes; and a network management system for allocating connections to said network, said connections utilizing network nodes and network links, in respect of each said connection there being a number of possible ways to implement the connection on the network, said network management system, when allocating a connection to the network, selecting one of the said number of possible ways to implement that connection, said network management system, when deciding whether to accept or reject a request for a said connection on said network, having the option to accommodate said request to reconfigure existing connections on said network by selecting, in respect of the or each existing connection reconfigured, a different one of the said number of possible ways to implement that connection, the reconfiguration by said network management system being constrained to a set of possible reconfigurations which is a subset of the set of all possible reconfigurations of said existing connections on the network.
2. A communications system according to claim 1 wherein said existing connections on the network comprise reconfigurable and unreconfigurable connections, and said reconfiguration by said network management system is constrained to reconfiguration of only said reconfigurable connections.
3. A communications system according to claim 2 wherein said network management system reconfigures a reconfigurable connection by changing the wavelength on which the connection is made and/or by changing the route taken by the connection.

4. A communications system according to claim 2 wherein said network management system reconfigures a reconfigurable connection by changing the wavelength on which the connection is made.
5. A communications system according to claim 1 wherein said reconfiguration by said network management system is constrained such that each existing connection on the network may be reconfigured, but not every time in all ways possible for that connection.
6. A communications system according to claim 5 wherein each connection comprises a main and a standby path, and said reconfiguration by said network management system is constrained in that only the standby path and not the main path of a connection can be changed.
7. A communications system according to claim 5 wherein, when first implementing a connection on the network, it is possible to choose both the route the connection will take and the wavelength on which the connection will be made, said reconfiguration by said network management system being constrained in that only the route or wavelength of a connection may be changed, not both.
8. A communications system according to claim 1 wherein said existing connections on the network switch between reconfigurable and unreconfigurable states, and said reconfiguration by said network management system is constrained to reconfiguration of only those existing connections reconfigurable at the time said request for a said connection on said network is made.